

#4 Crude Unit Emergency Operations (Volume III)

100 Emergency Shutdown

EXAPILOT

<u>101</u>	Emergency Shutdown, Hot	X
<u>103</u>	C1100 Overhead Small Leak No Fire, or Small Leak, Small Fire	X
<u>105</u>	C-1100 Overhead (Major Leak)	X

200 Loss of Utilities

<u>201</u>	Loss of Feed, Partial	X
<u>202</u>	Loss of Feed, Total	X
<u>204</u>	Loss of Power, Total	X
<u>205</u>	Loss of 480 Volt Bus	X
<u>206</u>	Loss of 2400 Volt Bus A	X
<u>207</u>	Loss of Cooling Water, Partial	X
<u>208</u>	Loss of Instrument Air	X
<u>209</u>	Loss of 800# Steam	X
<u>210</u>	Loss of 150# Steam	X
<u>211</u>	Loss of 50# Steam	X
<u>214</u>	Loss of 2400 Volt Bus B	X

400 Unusual Occurrences

IDLH Template

<u>401</u>	Response to Fire	
<u>402</u>	H ² O in Crude Feed/AGAR Reading 7% or more H ² O	
<u>403</u>	V-1103 Foaming Response	X
<u>404</u>	Loss of Flow Overhead V-1103	
<u>405</u>	Loss of Both P-1190s	
<u>406</u>	Tube Rupture-F-1100A or B	
<u>407</u>	Loss of Both P-1148's	
<u>408</u>	Chemical Spill	
<u>409</u>	Earthquake	
<u>410</u>	Secondary Exchanger Train (Major Leak)	
<u>411</u>	Loss of Both 1195's	
<u>412</u>	Loss of Both P-1168s	

DHT Emergency Operations (Volume III)

200 Loss of Utilities

- 202 Total Power Outage
- 203 Loss of 480 Volt Bus 16A-2A and 16B-2B at # 16 Substation
- 203C Loss of 2400 Volt Bus 16A-1A at # 16 Substation
- 203D Loss of 2400 Volt Bus 16B-1B at # 16 Substation
- 204 Loss of Instrument Air
- 205 Loss of Cooling Water
- 206 Loss of V-1615 Steam Generator
- 207 Loss of Fuel Gas

300 Loss of Critical Systems and Components

- 301 Temporary Loss of K-1600 (5 minutes or less)
- 302 Loss of K-1600
- 305 Temporary Loss of Make up Hydrogen
- 306 Loss of Make up Hydrogen
- 307 Loss of Feed Pumps P-1601/A
- 309 Loss of Hot Feed

400 Unusual Occurrences

IDLH Template

- 401 Furnace Tube Rupture F-1610
- 402 Temperature Runaway in R-1610
- 403 Reactor Runaway During Feed Introduction of Fresh Catalyst R-1610
- 407 Hydrogen Availability Contingency
- 409 Chemical Spill (TBA / DMDS)
- 411 Response to Fire
- 414 Emergency Wash Oil to RLOP
- 415 Earthquake